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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,170	02/28/2002	Haruo Fujii	03500.016232	4819

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EXAMINER
LEE, SUSAN SHUK YIN

ART UNIT	PAPER NUMBER
2852	

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,170

Applicant(s)

FUJII ET AL.

Examiner

Susan S. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-12 and 14-16 is/are rejected.
- 7) ☒ Claim(s) 5-8, 13 and 17-20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other:

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

Claims 1-20 are objected to because of the following informalities:

As to claim 1, lines 4, "generatrix direction" does not make sense.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Pannekoek et al. (4,748,464).

Pannekoek et al. discloses an image forming element for an electrostatic printer. The image forming element comprises a drum 1 having an insulating surface on which are disposed a plurality of image forming electrodes comprising a first group 4 and a second group 2. The second group of electrodes 2 reads on the instant invention's switching elements. Each electrode 2 is connected to one of the blocks 3 which are disposed on one side of the drum 1 outside of the image-forming zone. Blocks 3

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represent the voltage means for selectively applying voltage to the electrodes 2 in accordance with an information pattern. Note column 2, line 64-column 3, line 5.

Blocks 3 read on the instant invention's voltage generating means. A magnetic roller 12 from an image forming station 11 is used to develop the drum 10 to form a powder image on the drum 10. The powder image is then transferred by pressure to a heated transfer roller 14. Note column 4, lines 49-65.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pannekoek et al. (4,748,464) in view of Kataoka et al. (6,389,260).

Pannekoek et al., as discussed above, differs from the instant invention by not disclosing the developer is one-component developer including toner, the developer is two-component developer including toner and carrier, and the developer is produced by dispersing toner in an insulation liquid.

Kataoka et al. discloses in a color image forming apparatus, it is preferable that the black image forming station uses two-component developer including toner and carrier, the color image forming station uses one-component developer including toner. Note column 10, line 65- column 11, line 3. Also the developer is a high viscosity liquid

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developer in which a charged toner is dispersed within insulating liquid. Note column 4, lines 57-61.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Pannekoek et al. with that of Kataoka et al. in order to produce color copies.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pannekoek et al. (4,748,464) in view of Higuchi et al. (5,539,440).

Pannekoek et al., as discussed above, differs from the instant invention by not disclosing switching element generating heat during transferring of the toner images.

Higuchi et al. discloses an image carrier 510 with a switching layer 504. Then the switching layer is set in an ON state, current flows to a heating resistive layer 505 at a peripheral portion to generate Joule heat. By using this Joule heat, the toner on the image carrier 510 are melted/transferred (fixed) onto the printing sheet 216. Note column 26, lines 39-46.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Pannekoek et al. with that of Higuchi et al. in order to transfer toner images onto a sheet with heat provided from the image carrier so that a fixing unit is not needed, thus making a printer more compact.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pannekoek et al. (4,748,464) in view of Shimizu (Japan, 260).

Pannekoek et al., as discussed above, differs from the instant invention by not disclosing the electrode or switching element is formed of semiconductor material.

Shimizu discloses electrodes formed of semiconductors. Note abstract.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Pannekoek et al. with that of Shimizu in order to increase data transfer as disclosed by Shimizu.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pannekoek et al. (4,748,464) in view of Shiozawa et al. (6,049,681).

Pannekoek et al., as discussed above, differs from the instant invention by not disclosing a density detecting means and a voltage applied to the developer carrying member set on the basis of result of the density detecting means.

Shiozawa et al. discloses it is well known in the art to detect a density of a toner image on a photosensitive drum and controlling developing bias according to the basis of the detected result for optimal density of developing toner images. Note column 2, lines 7-17.

Allowable Subject Matter

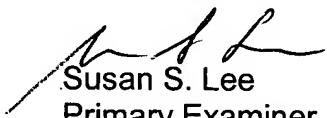
Claims 5-8, 13, and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Van Der Meer et al., Haas et al., Koga et al., and Künst disclose art in image carriers using electrodes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan S. Lee whose telephone number is 703-308-2138. The examiner can normally be reached on Mon. - Fri., 10:30-8:00, Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Art Grimley can be reached on 703-308-1373. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Susan S. Lee
Primary Examiner
Art Unit 2852

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